NOTE IX.

ON THE WEST-AFRICAN SPECIES OF THE GENUS GERRES.

BY

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Some time ago the Leyden Museum received a small collection of fishes and reptiles from the Congo-Coast, kindly presented by Mr. Kamerman. Among them there were several specimens of *Gerres melanopterus* which, as is known, was firstly described by Bleeker [1]) in his »Mémoire sur les Poissons de la Côte de Guinée" after a single specimen, collected by Mr. Pel, the late Dutch Governor of the Coast of Guinea. In that paper Bleeker also gives a description and figure of another species of that genus, *G. octactis*, based upon a single specimen, from the same locality. A third species from the West-Coast of Africa previously had been described by Günther under the name *G. nigri*. Steindachner however in his interesting paper »zur Fischfauna des Senegal" [2]) comes to the conclusion that *Gerres octactis* is not a distinct species, but should be considered as an adult specimen of *G. melanopterus*.

1) Natuurk. Verhandl. Holl. Maatsch. van Wetenschappen. Haarlem. 2e Verz. Dl. XVIII, 1863, p. 43.

2) Sitzungsber. Akad. Wissensch. Wien. 1e Abth. Bd. LX. p. 961.

I was happy enough to find Bleeker's type specimens in our collection, and I had also the opportunity to examine several specimens of *G. melanopterus* and *G. nigri*, collected on the Coast of Liberia by Büttikofer and the late Sala. After a careful study I cannot accept Steindachner's suggestion concerning the identity of the two species above referred to, as I hope to demonstrate in the following lines.

In comparing Bleeker's type specimen of *G. octactis* with the description given by Günther of *G. nigri* [1]), I cannot detect any striking difference between these two species. Though Bleeker mentions that *G. octactis* differs from those species of the genus, which have eight soft rays in the anal fin (*G. plumieri*, — *rhombeus*, — *punctatus*, — *nigri*), by having the praeorbital and praeoperculum not denticulated, Günther clearly says in his description of *G. nigri* »the praeoperculum is rounded, without any denticulations whatever". Günther says nothing about the praeorbital, but if it was denticulated he would certainly have mentioned it, as he did describing *G. Plumieri*. Moreover Bleeker neither in his description nor in his figure pays any attention to the indistinct reflecting, longitudinal streaks above the lateral line, though in that respect *G. octactis* quite agrees with *G. nigri*. There also are insignificant differences in the dimensions of the two species, as the following table shows:

	Height of the body in its total length (without caudal.)	Length of the head in the total length.	Diameter of the eye in the length of the head.
G. octactis.	$2^1/_6$	$3^1/_2$	$2^1/_5$
G. nigri.	$2^3/_5$	$3^2/_5$	about 3

1) Catalogue of Fishes of the British Museum. Vol. I. p. 347.

The only striking difference between the two species seems to exist in the number of scales in the lateral line, Günther stating that number for *G. nigri* at 42, whereas there are 46 in *G. octactis*; but in three specimens of *G. nigri* from Liberia I find the number of scales in the lateral line varying from 44 to 46. The above investigation may suffice to show that *G. nigri* and *G. octactis* surely should be considered as quite identical.

Now I may be allowed to point out the difference between *G. nigri* (—*octactis* Blkr.) and *G. melanopterus*, as both species differ from each other by so striking characteristics, that they can be distinguished at first sight.

The upper profile of the head in *G. melanopterus* descends anteriorly over the snout in a straight line, whereas in *G. nigri* the profile of the snout and of the upper part of the head meet at an obtuse angle just in front of the eye; in the figures given by Bleeker this difference is quite conspicuous. The distance between the eyes in *G. nigri* is about equal to the diameter of the eye, while in *G. melanopterus* it is much smaller and contained $1^1/_3$ times in the eye-diameter. The most striking difference however we find in the form of the groove for the processes of the intermaxillary bones. As Günther very exactly describes, in *G. nigri* that groove is triangular, with a somewhat rounded posterior angle, and widening anteriorly, so that the basis measures about $^1/_3$ of the distance between the eyes. Yet in *G. melanopterus* the groove is elongate, oval, with the narrower end directed forwards and the greatest breadth reaching only $^1/_5$ of the distance between the eyes. In *G. nigri* the angle of the praeoperculum is round, without a trace of denticulations; in *G. melanopterus* the denticulations are quite conspicuous, as was already observed by Steindachner. The fact that Bleeker has not noticed this in his description, must surely be imputed to the smallness of the specimen which he examined; it only had a length of 75 m.m. (without caudal), while the largest of our specimens measures 110 m.m. In *G. melanopterus* the height

of the body in proportion to ist length also is less than in *G. nigri*, in the former the height being contained 3 times in the length, in the latter $2^1/_5$ only. Adding to this characters the large black spot on the anterior point of the spinous dorsal in *G. melanopterus*, there certainly can be no doubt as to the specific difference of the two species in question.